

REMARKS

Claims 1 - 24 are pending. Claims 24 has been amended. No new matter has been introduced. Applicant respectfully request reexamination and reconsideration.

In the May 17, 2005 Office Action, the Examiner indicated that claims 1 - 23 were allowed. Accordingly, applicant respectfully submits that claims 1 - 23 are in condition for allowance.

The Examiner rejected claim 24 under 35 U.S.C. § 103(a) as being unpatenable over U.S. Patent No. 5,951,859 to Suzuki ("the Suzuki 859 reference") in view of U.S. Patent No. 5,489,746 to Suzuki et al. ("the Suzuki 746 reference"). This rejection is respectfully traversed in so far as it is applicable to the presently pending claim.

Claim 24, as amended, distinguishes over the Suzuki 859 and the Suzuki 746 references. Claim 24, as amended, recites:

A method of controlling a musical tone reproducing apparatus that is provided in a portable terminal apparatus having a system controller, to carry out musical tone reproduction, comprising the steps of:

reading out a tone color parameter for a tone color to be changed to from a tone generator memory based on a command from said system controller to change the tone color, said tone generator memory being a general-purpose memory in which is stored a tone color parameter group comprising a predetermined number of tone color parameters;

inputting the tone color parameter for the tone color to be changed to read out from the tone generator memory to a cache memory, at a predetermined data width;

outputting the tone color parameter for the tone color to be changed to from the cache memory at a data width larger than the predetermined data width;

transferring the tone color parameter for the tone color to be changed to that is outputted from the cache memory at the data width larger than the predetermined data width to a tone generator;
and

causing the tone generator to generate a musical tone based on the transferred tone color parameter.

The Suzuki reference does not disclose, teach, or suggest the method of controlling a tone parameter of claim 24, as amended. The Examiner states that the Suzuki reference discloses reading out a tone color parameter (TC1) for a tone color to be changed from a tone generator memory based on a command from said system controller to change the tone color, transferring the tone color parameter read out from the tone generator memory to a temporary memory (buffer PARBRFn), and a second transferring of the tone color parameter for the tone color to be changed to from the temporary memory to a tone generator (63) that carries out the musical tone reproduction. The Examiner states that the Suzuki 859 reference does not explicitly recite a cache memory. (*Office Action, page 2*).

Specifically, the Suzuki 859 reference discloses a multi-tone generator that has three tone generators (TC1, TC2, and TC3) of different types (PCM tone generator, FM tone generator, and physical model tone generator). A common control unit 5 is shared by the plurality of tone generators TC1 to TC3, each having a specific controller necessary for its own control without having by itself the common control unit 6. An input signal IN is supplied to the multi-tone generator, the input signal being a key-on/off, a key code, tone color information, touch information, and the like. The common control unit 5 may have a phase generator 1, an envelope generator 2, a low frequency oscillator 3, and a digital control filter 4. In accordance with a tone color information contained in the input signal IN, a predetermined one of the tone generators is selected and operated. The multi-tone generator TC outputs a musical tone signal OUT which may be a signal generated by one of the tone generators TC1 to TC3. The musical tone signal generated by the multi-tone generator TC may be returned to the common

control unit 5 to be passed through the digital control filter and then to the multi-tone generator TC and output as a musical tone signal OUT. (*Suzuki '859, col. 2, line 53 - col. 3, line 33*).

This is not the same as a method of controlling a musical tone reproducing apparatus to carry out musical tone reproduction including **inputting the tone color parameter for the tone color to be changed to read out from the tone generator memory to a cache memory, at a predetermined data width, outputting the tone color parameter for the tone color to be changed to from the cache memory at a data width larger than the predetermined data width, and transferring the tone color parameter for the tone color to be changed to that is outputted from the cache memory at the data width larger than the predetermined data width to a tone generator.** It is not the same because the Suzuki 859 reference does not disclose a cache memory, as identified by the Examiner in page 2 of the office Action. Accordingly, there can be no reading out from a tone generator memory to a cache memory and from a cache memory to a tone generator. Further, the Suzuki 859 reference discloses a buffer, but does not disclose reading out a tone color parameter at a predetermined data width to the cache memory and then output the tone color parameter to be changed to from the cache memory (to the tone generator) at a data width larger than the predetermined data width, as is recited in claim 24, as amended. There is no disclosure in the Suzuki 859 reference that the tone color parameter has one data width when entering a cache memory and is read out at a different data width. Accordingly, applicant respectfully submits that claim 24, as amended, distinguishes over the Suzuki 859 reference.

The Suzuki 746 reference does not make up for the deficiencies of the Suzuki 859 reference. The Examiner states that the Suzuki 746 reference discloses the use of a cache memory to improve storage efficiency. (*Office Action, page 2*). Specifically, the Suzuki 746 reference discloses that a tone generation device includes a waveform memory in which data is stored and from which data is read for reproduction of a tone. (*Suzuki 746, col. 3, lines 36 - 42*). A data format of tone waveform data corresponding to a tone color is divided up into frames which each consist of data from 16 sample points. Each of the data for the first to fourth sample points has an extra one bit (a hidden bit for hidden information). When the hidden bits are aggregated together to form 4-bit information, the contents of the "hidden information" are exposed and information designating data length may be assigned as the hidden information. (*Suzuki 746, col. 3, line 50 - col. 4, line 9*). The length of the data stored in the memory is made variable and thus the number of wasted storage cells can be reduced to realize efficient utilization of the memory. The data length designation data may be stored in a cache memory in a tone source circuit. (*Suzuki 746, col. 16, line 60 - col. 17, line 2*). This is not the same as a method of controlling a musical tone reproducing apparatus to carry out musical tone reproduction including **inputting the tone color parameter for the tone color to be changed to read out from the tone generator memory to a cache memory, at a predetermined data width, outputting the tone color parameter for the tone color to be changed to from the cache memory at a data width larger than the predetermined data width, and transferring the tone color parameter for the tone color to be changed to from the cache memory at the data width larger than the predetermined data width to a tone generator.** It is not the


same because the Suzuki 746 reference is disclosing the use of a cache memory to stored data length designation data and the Suzuki 746 reference does not mention **inputting the tone color parameter to a cache memory at a predetermined data width and outputting or transferring the tone color parameter from the cache memory to the tone generator at a data width larger than the predetermined data width**, as is recited in claim 24, as amended. Accordingly, applicant respectfully submits that claim 24 distinguishes over the Suzuki 746 / Suzuki 859 combination.

Applicant respectfully submits that all claims are in condition for allowance. If the Examiner has any questions, the Examiner is requested to call either of the undersigned attorneys at the Los Angeles telephone number (213) 488-7400 should the Examiner believe that such a telephone conference would advance prosecution of the application.

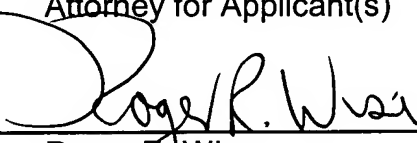
Respectfully submitted,

PILLSBURY WINTHROP LLP

Date: August 15, 2005

By: 
Mark R. Kendrick
Registration No. 48,468
Attorney for Applicant(s)

Date: August 15, 2005

By: 
Roger R. Wise
Registration No. 31,204
Attorney for Applicant(s)

725 South Figueroa Street, Suite 2800
Los Angeles, CA 90017-5406
Telephone: (213) 488-7100
Facsimile: (213) 629-1033